

华西毛茛属五新种

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摘要 描述了自我国西部发现的毛茛属五新种,大邑毛茛、铜仁毛茛、舟曲毛茛、崇州毛茛和共和毛茛,并分别给出其与近缘种的区别特征。

关键词 毛茛属; 新种; 华西

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Five New Species of *Ranunculus* from West China

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Abstract Five species of the genus *Ranunculus*, *R. dayiensis*, *R. tongrenensis*, *R. zhouquensis*, *R. chongzhouensis* and *R. gongheensis*, are described as new from West China, and the diagnostic differences between them and their allies are given respectively.

Key words *Ranunculus*; new species; West China

最近笔者鉴定了一批毛茛属植物标本,从采自我国西部的标本中发现了以下五新种,这五种均隶属毛茛属的最大亚属,毛茛亚属 Subgen. *Ranunculus* 的最大组,美丽毛茛组 Sect. *Ranunculus*^[3] [Sect. *Auricomus* (Spach) Schur]^[1]。

大邑毛茛 图 1: A ~ F

Ranunculus dayiensis W. T. Wang, sp. nov.

Fig. 1: A - F

(Sect. *Ranunculus* ser. *Songorici* Ovcz.)

Species nova haec est affinis *R. hirtello* Royle, qui foliis majoribus usque ad 5 cm latis utrinque depresso puberulis, eis caulinis breviter petiolatis vel sessilibus omnibus simplicibus 3-partitis vel 3-sectis, floribus 2-3 in monochasium dispositis differt.

Small perennial herbs. Fibrous roots 4-8 cm long. Stems 4-10 cm tall, sparsely puberulous, shortly branched. Basal leaves several, long petiolate; blades papery, pentagonal, 3-8 × 6-14 mm, at base cordate, 3-parted nearly to base or 3-sect,

central segment broadly rhombic or rhombic-obovate, at apex 3-dentate, or 3-lobed to 3-fid, lateral segments larger, obliquely flabellate, unequally 2-lobed to 2-parted; surfaces adaxially appressed-puberulous, abaxially glabrous; petioles slender, 15-30 mm long, glabrous. Lowermost cauline leaf similar to basal leaves, long petiolate, simple, 3-sect, or ternate, with petiolulate leaflets; upper cauline leaves smaller, shortly petiolate or sessile, 3-sect, uppermost cauline leaf with linear segments. Flowers singly terminal. Receptacle sparsely puberulous. Sepals 5, greenish, on margin purple, narrowly ovate, 4 × 2.5-3 mm, adaxially glabrous, abaxially pubescent. Petals 5, yellow, obovate, rarely narrowly ovate, 5-7 × 3-5 mm, glabrous, apex rounded, nectary pits minute, claws ca. 0.5 mm long. Stamens 20-25, glabrous; filaments narrowly linear, 1-2 mm long; anthers narrowly oblong, 1-1.2 mm long. Carpels 20-50; ovaries ovoid, 0.8-1.3 mm long, sparsely puberulous; styles 0.5-1.2 mm long, glabrous.

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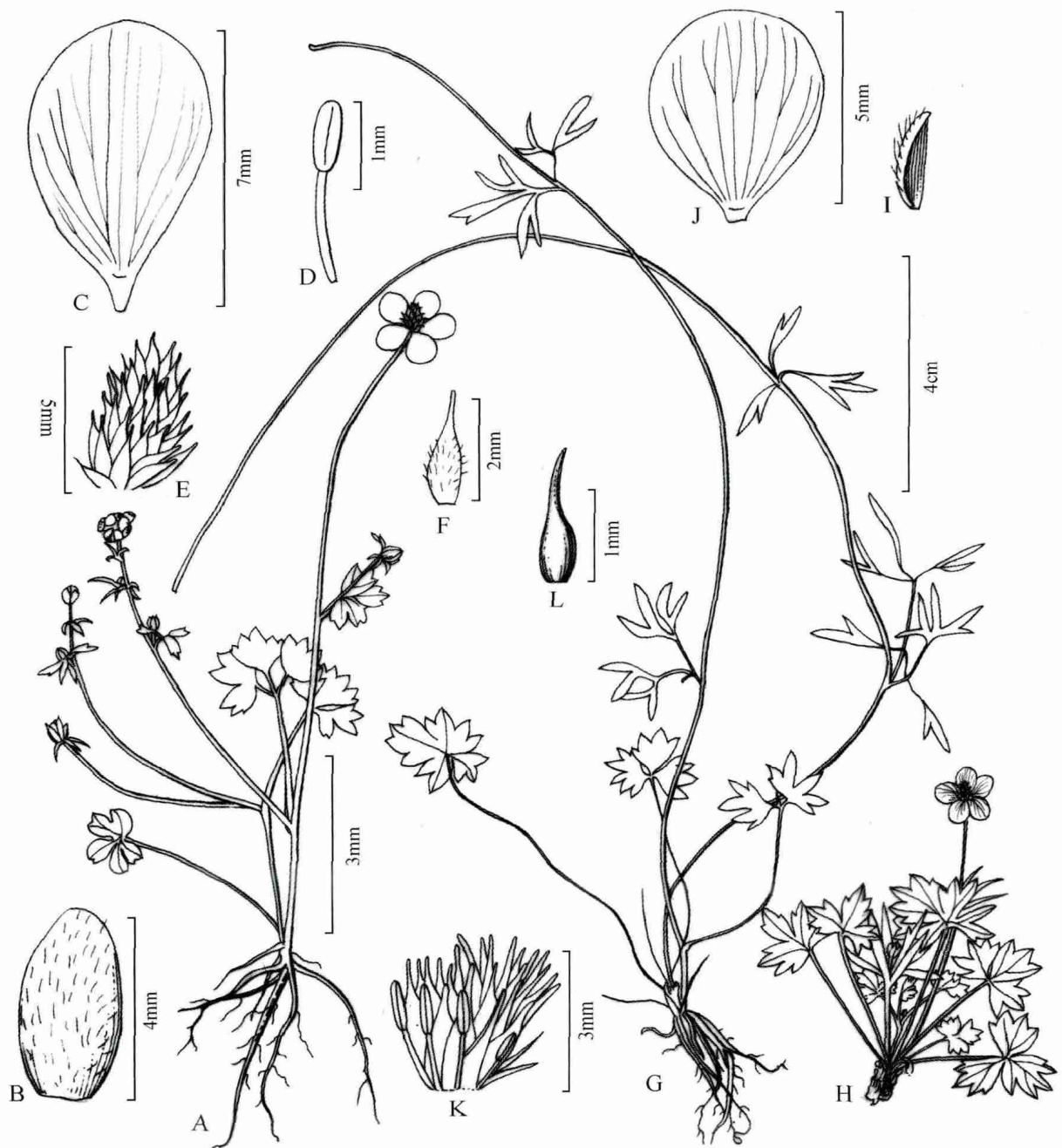


图1 A~F. 大邑毛茛: A. 植株全形; B. 萼片(背面观); C. 花瓣; D. 雄蕊; E. 雌蕊群; F. 瘦果 G~L. 铜仁毛茛: G. 具匍匐茎的植株; H. 开花植株; I. 萼片; J. 花瓣; K. 雄蕊群和雌蕊群; L. 心皮

Fig. 1 A - F. *R. dayiensis*: A. Hbit; B. Sepal (dorsal view); C. Petal; D. Stamen; E. Gynoecium; F. Achene G - L. *R. tongrenensis*: G. A plant with stolons; H. A flowering plant; I. Sepal; J. Petal; K. Androecium and gynoecium; L. Carpel (from holotype)

四川(Sichuan): 大邑县, 黑水河自然保护区(Dayi Xian, Heishuihe Nature Reserve), 2007-06-06 朱大海、冯正波、张超、王飞(D. H. Zhu, Z. B. Feng, C. Zhang & F. Wang) 20070593 (holotype, PE); 同地(same locality), 红石堡(Hongshibao),

alt. 2 550 m, 林下(under forest), 草本, 花黄色(herb fls. yellow) 2007-06-06 朱大海、冯正波、张超、王飞 20070688(PE)。

本种与基隆毛茛(*Ranunculus hirtellus* Royle) 在亲缘关系上相近, 与后者的区别在于本种的

基生叶较小, 宽 6~14 mm, 只在上部被短柔毛, 下面无毛, 最下部茎生叶具长柄, 常为三出复叶, 花单生茎顶端。在基隆毛茛, 基生叶较大, 宽达 5 cm, 两面被短柔毛, 茎生叶具短柄或近无柄, 均为单叶 3 深裂或 3 全裂, 花 2~3 朵组成单歧聚伞花序^[4]。

铜仁毛茛 图 1: G~L

Ranunculus tongrenensis W. T. Wang, sp. nov. Fig. 1: G-L

(Sect. *Ranunculus* ser. *Songorici* Ovcz.)

Species nova haec est affinis *R. petrogeiton* Ulbr., qui caulibus puberulis, stolonibus nullis, foliorum caulinarum segmentis rhombicis 3-dentatis vel 3-lobatis, flore staminibus numerosis praedito recedit.

Small perennial herbs. Stems 1-2, 3.5-6.5 cm tall, strigillose, simple, 2-foliate. Basal leaves several, long petiolate; blades papery, pentagonal, 4-9 × 6-17 mm, at base cordate, 3-sect, rarely 3-parted, central segment rhombic-obovate or rhombic, 3-lobed or 3-fid, lateral segments larger, obliquely flabellate, unequally 2-lobed to 2-parted; surfaces adaxially and abaxially sparsely puberulous or subglabrous; petioles slender, 12-65 mm long, glabrous. Cauline leaves smaller, shortly petiolate or sessile, 3-sect, with linear, entire segments. Stolons sometimes present, slender, ca. 20 cm long, 0.8 mm across, sparsely appressed-puberulous, simple, 2-3-foliate; leaves ternate, lower one long petiolate, upper ones shortly petiolate or sessile, leaflets 1-2 times dissected, with narrowly lanceolate or linear lobes. Flowers singly terminal. Receptacle glabrous. Sepals 5, navicular-elliptic, ca. 2.2 × 1 mm, adaxially glabrous, abaxially puberulous. Petals 5, yellow, broadly obovate, ca. 5 × 4.5 mm, glabrous, nectary pits minute; claws inconspicuous. Stamens ca. 6, glabrous; filaments narrowly linear, 0.5-1 mm long; anthers narrowly oblong, 0.8-1 mm long. Carpels ca. 40, glabrous; ovaries ovoid, 0.6-1 mm long; styles ca. 0.6 mm long.

青海 (Qinghai): 铜仁县 (Tongren Xian), alt. 4 000 m, high summit, often under forest, herb, fls. yellow, 1936-09-15, 王作宾 (T. P. Wang) 3204 (holotype, PE).

本种与太白山毛茛 (*Ranunculus petrogeiton* Ulbr.) 在亲缘关系上接近, 与后者的区别在于本种的茎被短糙伏毛, 常具匍匐茎, 茎生叶的全裂片条形, 全缘, 花具 6 枚雄蕊。在太白山毛茛, 茎疏被短柔毛, 无匍匐茎, 茎生叶的全裂片菱形, 具 3 齿或 3 浅裂, 花具多数雄蕊^[4]。

舟曲毛茛 图 2: A~E

Ranunculus zhouquensis W. T. Wang, sp. nov. Fig. 2: A-E

(Sect. *Ranunculus* ser. *Songorici* Ovcz.)

Ob folia 3-secta, flores singulariter terminales, petala oblonga species nova haec est affinis *R. micronivali* Hand.-Mazz., qui caulibus humilibus 4-6 cm altis, foliis basalibus omnibus simplicibus minoribus usque ad 1.1 cm latis, petalis majoribus 4-5.2 mm longis, ovario stylo brevioribus distinguitur.

Perennial herbs. Fibrous roots ca. 6 cm long, at base 1 mm across, downwards gradually thinning. Stems 1-3, slender, 10-20 cm tall, near base 0.3-0.8 mm across, near apex sparsely puberulous, branched. Basal leaves several, with lower cauline leaves long petiolate, simple, rarely ternate; blades thin-papery, pentagonal, 0.5-1.5 × 1.1-2.4 cm, at base cordate, (2-) 3-sect, segments sessile, rarely shortly petiolulate, central segment obovate or broadly rhombic, 0.4-1 cm broad, 3-lobed, lateral segments larger, obliquely flabellate, unequally 2-fid; surfaces adaxially appressed-puberulous, abaxially glabrous; petioles slender, 4-10 cm long, glabrous. Upper cauline leaves smaller, shortly petiolate or sessile, with narrowly lanceolate or linear segments. Flowers singly terminal to stem and branches. Receptacle glabrous. Sepals caducous, not seen. Petals 5, oblong, ca. 3.8 × 1.5 mm, glabrous, 3-nerved, apex truncate-rounded, nectary pits small, claws ca. 0.5 mm long. Stamens ca. 7, glabrous; filaments narrowly linear, 1.2-1.7 mm long; anthers oblong, 0.5-0.6 mm long. Carpels ca. 20, glabrous; ovaries narrowly ovate, 0.8-1.5 mm long; styles 0.5-0.6 mm long. Aggregate fruit ovoid, 5 × 3-3.5 mm; achenes biconvex, suborbicular, 1.4-1.8 × 1.1-1.4 mm, glabrous; persistent styles 0.5-0.7 mm long.

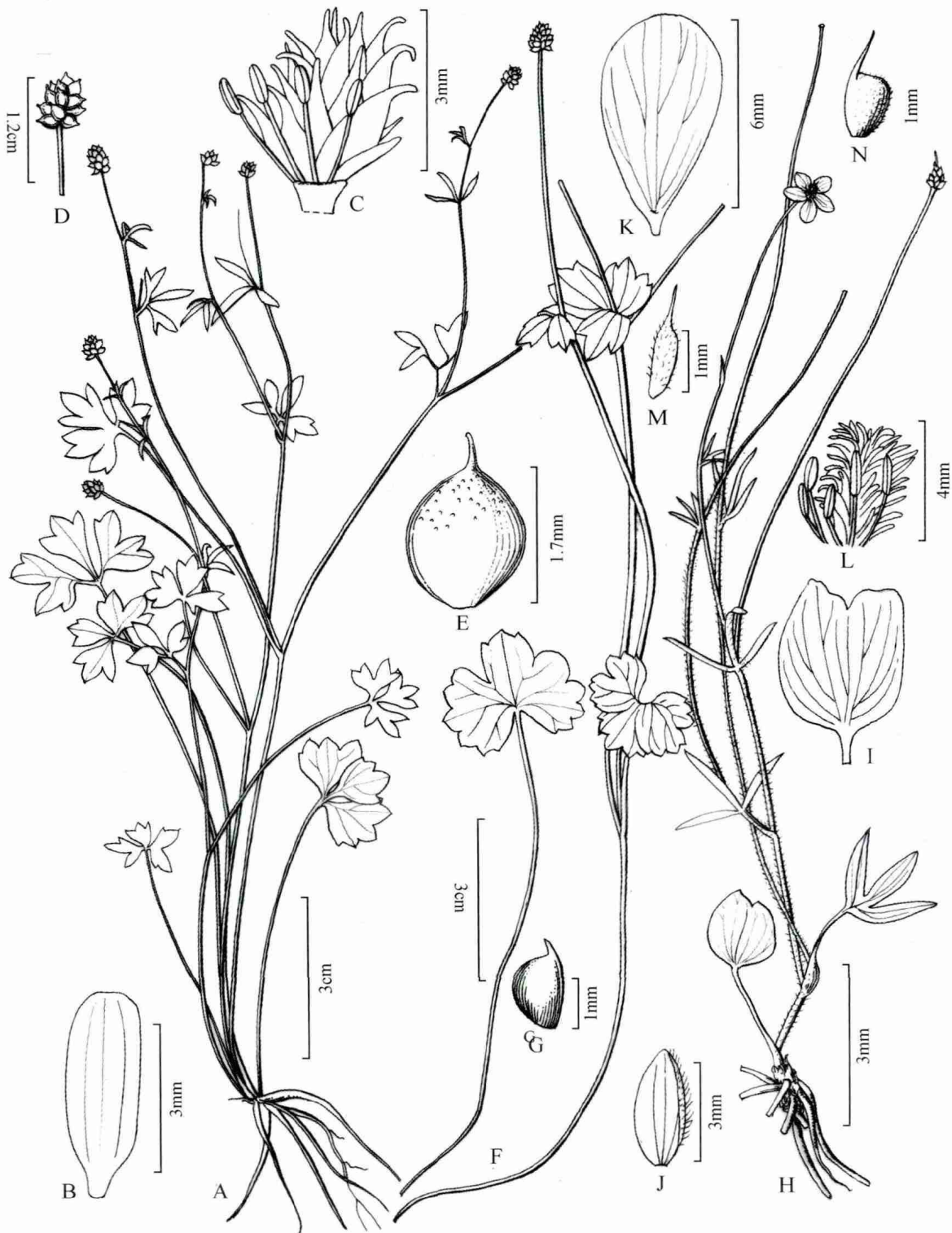


图2 A~E. 舟曲毛茛: A. 植株全形; B. 花瓣; C. 雄蕊群和雌蕊群; D. 聚合果; E. 瘦果 F~G. 崇州毛茛: F. 植株全形; G. 瘦果 H~N. 共和毛茛: H. 植株全形; I. 基生叶叶片; J. 萼片(腹面观); K. 花瓣; L. 雄蕊群和雌蕊群; M. 心皮; N. 瘦果

Fig. 2 A - E. *R. zhouquensis*: A. Habit; B. Petal; C. Androecium and gynoecium; D. Aggregate fruit; E. Achene F - G. *R. chongzhouensis*: F. Habit; G. Achene H - N. *R. gongheensis*: H. Habit; I. Blade of basal leaf; J. Sepal (ventral view); K. Petal; L. Androecium and gynoecium; M. Carpel; N. Achene (from holotype)

甘肃 (Gansu): 舟曲县, 插岗林场 (Zhouqu Xian, Chagang Tree Farm), alt. 2 750 m, 沟边 (by streams), 1998-07-21, 孔宏智 (H. Z. Kong) 98-40 (holotype, PE).

本种与窄瓣毛茛 (*Ranunculus micronivalis* Hand.-Mazz.) 在亲缘关系上相近, 与后者的区别在于本种的茎高 10~20 cm, 基生叶为单叶, 少数为三出复叶, 较大, 宽达 2.4 cm, 花瓣较小, 长约 3.8 mm, 子房比花柱长。在窄瓣毛茛, 茎低矮, 高 4~6 cm, 基生叶均为单叶, 较小, 宽达 1.1 cm, 花瓣较大, 长 4~5.2 mm, 子房比花柱短^[4]。

崇州毛茛 图 2: F~G

Ranunculus chongzhouensis W. T. Wang, sp. nov. Fig. 2: F-G

(Sect. *Ranunculus* ser. *Dongrergenses* W. T. Wang)

Species nova haec est affinis *R. menyuanensis* W. T. Wang, qui caulibus inferne sparse superne densiuscule puberulis, foliis caulinis inferis eis basalibus dissimilibus subsessilibus rhombicis 3-partitis, receptaculo puberulo abhorret.

Perennial herbs (?). Roots not seen. Stems slender, 18-23 cm tall, near base ca. 1 mm across, only near apex sparsely puberulous. Basal leaves solitary (?), long petiolate; blades papery, reniform, 1.2-1.4 × 1.8-2.6 cm, at base cordate, 3-lobed, central lobe shortly obtusely-trapeziform or obovate-obtusely-trapeziform, at apex 3-lobed-crenate, lateral lobes larger, obliquely flabellate, unequally 2-lobed, at margin rounded-crenate; surfaces adaxially glabrous, abaxially appressed-puberulous; petioles slender, 6.5-9.5 cm long, glabrous or only near apex with a few hairs. Cauline leaves 2-3, lower one similar to basal leaf, but slightly smaller, with shorter petiole and 3-sect, with segments long elliptic or narrowly lanceolate. Flowers singly terminal, not seen. Aggregate fruit ovoid, ca. 5 × 4 mm; receptacle glabrous; achenes ca. 24, biconvex obliquely obovate or broadly obovate, 1.2-1.8 × 1-1.5 cm, glabrous; persistent styles 0.5-1 mm long.

四川 (Sichuan): 崇州市, 鞍子河自然保护区, 鸡冠山 (Chongzhou Shi, Anzihe Nature Reserve, Jiguan Shan), alt. 3000 m, 林下草丛 (among grass-

ses under forest), 草本, 高 0.2 m, 花黄色 (herbs, 0.2 m tall, fls. yellow), 2007-07-27, 冯正波、朱大海、李小杰 (Z. B. Feng, D. H. Zhu & X. J. Li) 4171 (holotype, PE).

本种与门源毛茛 (*Ranunculus menyuanensis* W. T. Wang) 在亲缘关系上相近, 与后者的区别在于本种的茎只近顶部疏被短柔毛, 下部茎生叶与基生叶相似, 但稍小, 具稍短叶柄, 3 全裂, 花托无毛。在门源毛茛, 茎下部疏被、上部稍密被短柔毛, 下部茎生叶与基生叶不相似, 近无柄, 呈菱形, 3 深裂, 花托被短柔毛^[4]。

共和毛茛 图 2: H~N

Ranunculus gongheensis W. T. Wang, sp. nov. Fig. 2: H-N

(Sect. *Ranunculus* ser. *Pulchelli* W. T. Wang)

Ob folium basale simplex indivisum, flores solitarios terminales, achenia puberula species nova haec est fortasse affinis *R. kunlunshanico* J. G. Liu, qui foliis basalibus 3-5 per plantam unicum ovatis apice acutis margine ciliatis utrinsecus 1-3-dentatis, acheniis majoribus 2 mm longis 1.5 mm latis praecclare distat.

Perennial herbs. Fibrous roots 2.5-5 cm long, near base 1.5-1.8 mm across, downwards gradually thinning. Stems 20-24 cm tall, puberulous, long 3-branched and 3-foliate. Basal leaf solitary, petiolate; blade papery, subquadrate, ca. 1.4 × 1.2 cm, at apex truncate, emarginate, at base rounded-truncate, at margin entire, glabrous; nervation trinerved, lateral basal nerves with 2-3 long secondary nerves, tertiary and quaternary nerves forming fine nets; petiole ca. 2 mm long, only near base with a few hairs. Lowermost cauline leaf petiolate (petioles 1.6-2.5 cm long), either flabellate, ca. 1.6 × 2 cm, 3-parted, with narrowly lanceolate entire lobes, or long elliptic, ca. 2.8 × 1.3 cm, pinnately lobed; the other cauline leaves shortly petiolate or sessile, 3-sect, with linear segments. Flowers singly terminal to stem and branches. Receptacle sparsely pilose. Sepals 5, navicular-elliptic-ovate, ca. 4 × 2 mm, adaxially glabrous, abaxially pubescent, trinerved. Petals 5, yellow, obovate or narrowly obovate, 6 × 2.5-3

mm, at apex rounded, glabrous, nectary pits minute, claws ca. 0.6 mm long. Stamens ca. 15, glabrous; filaments narrowly linear, 1.5 - 2.2 mm long; anthers narrowly oblong, 1 - 1.2 mm long. Carpels ca. 50; ovaries narrowly obovate, 1 - 1.2 × 0.6 mm, puberulous; styles 0.8 - 1 mm long, glabrous. Aggregate fruit narrowly ovoid, ca. 7 × 4 mm; achenes slightly biconvex, obliquely broad-obovate, 1.2 × 1.2 mm, puberulous, apex truncate; persistent styles 0.8 mm long.

青海(Qinghai): 共和县, 新哲茶卡沟(Gonghe Xian, Xinzhechaka Valley), alt. 5600 m, 阴坡草地(on grassland of shaded slope), 花黄色(fl. yellow), 1975-08-10, 郭本兆, 王为义(B. Z. Guo & W. Y. Wang) 12031 (**holotype**, PE)。

本种的基生叶为单叶, 不分裂, 花单朵顶生, 瘦果被短柔毛, 因此与也具上述特征的昆仑毛茛(*Ranunculus kunlunshanicus* J. G. Liu) 可能有亲缘关系, 与后者的区别在于本种的每一植株的基生

叶只1枚, 近方形, 顶端微凹, 无毛, 边缘全缘, 瘦果较小, 长和宽均为1.2 mm。在昆仑毛茛, 每一植株的基生叶3~5枚, 卵形, 顶端急尖, 边缘被缘毛, 每侧有1~3齿, 瘦果较大, 长2 mm, 宽1.5 mm^[2, 4]。

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